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(54) Adjustable balloon membrane made from peek material

(57) A balloon element for use in a catheter has a multi-layered single-walled structure and a compliance characteristic exhibiting a first, non-compliant region at low operating pressures and a secondary compliant region at higher operating pressures. The properties of the balloon element permit it to serve for both dilatation of bodily vessels and stent delivery and implantation. A method of manufacturing the balloon element involves

extrusion of a tube of material, such as PEEK, which serves as an inner wall layer of the finished balloon element and provides the desired strength and compliance characteristics of the balloon element, and a post-extrusion over the first tube, which provides an outer wall layer in the finished balloon element imparting abrasion resistance and other desirable mechanical properties.

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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US 5 290 306 A (T. TROTTA) 1 March 1994 * the whole document *	1-4, 10, 13	A61L29/00 A61M25/10
D, A	US 5 348 538 A (L. WANG ET AL) 20 September 1994 * column 2, line 25 - line 50 * * column 3, line 43 - column 5, line 30; claims *	1, 6-8	
A	WO 95 09667 A (BOSTON SCIENTIFIC CORPORATION) 13 April 1995 * page 1, line 29 - page 2, line 24 * * page 6, line 21 - page 8, line 23; claims *	1-4, 10	
P, D, A	US 5 447 497 A (D.J. SOGARD ET AL) 5 September 1995 * the whole document *	1-8	
A	US 5 403 340 A (L. WANG ET AL) 4 April 1995 * claims *	13	TECHNICAL FIELDS SEARCHED (Int.Cl.6) A61L A61M
A	EP 0 553 980 A (ADVANCED CARDIOVASCULAR SYSTEMS) 4 August 1993 * claim 8 *	13	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 7 August 1998	Examiner Fletcher, A
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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